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Case KIP 002

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In Re Application of: Norio Miura et al.  
SN: 09/887.507 Filing Date: 22/06/01

**Title: AN APPARATUS FOR MEASURING A MEDICAL SUBSTANCE, A SENSOR FOR USE IN THE APPARATUS, AND A SENSING ELEMENT FOR USE IN THE SENSOR**

Hon. Commissioner of Patents and Trademarks  
Washington, DC 20231

September 3, 2001

SIR.

## INFORMATION DISCLOSURE STATEMENT - SECTION 1.97(b)

Under the provisions of 37 C.F.R. Section 1.56, and in accordance with 37 C.F.R. Sections 1.97 and 1.98, applicants' representative hereby submits U.S. Patent & Trademark Office Form PTO-1449. Copies of the references cited therein are submitted for consideration in the examination of the above-referenced patent application. It is respectfully requested that they be made of record, along with whatever references the Examiner may find in the course of a search, should the Examiner consider them material to the subject application.

In accordance with Section 1.97(b), this information is being submitted within three (3) months of the filing date of 22/06/01 for this application.

The US patents were cited during prosecution of the basic application in the US.

The publications have been supplied by the inventors as relating to the subject matter of the application.

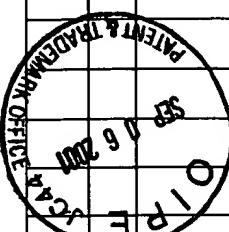
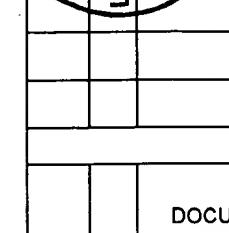
However, the references do not disclose an apparatus for measuring a medical substance where a prism having a high refractive index, a thin metal film formed on one of the surfaces of the prism, a light source for making a light incident upon the thin metal film, and a detector for detecting an incident angle of a light being made incident upon a film on which a plasmon resonance phenomenon is generated on the thin metal film are

provided. The medical substance, i.e. antigen as an object to be measured, is fixed to the surface of the thin metal film, and the condition for generating the plasmon resonance phenomenon is varied when a mixture of antibody which is coupled with the medical substance in a specific manner and a sample is made contact with a surface of the thin metal film; and the amount of the medical substance can be detected by recognizing the change with a high sensitivity.

Respectfully submitted,



Klaus J. Bach, Reg. No.: 26832

FORM PTO-1449		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY. DOCKET NO.		SERIAL NO.	
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				APPLICANT		XXXXXXX et al.	
(Use several sheets if necessary)				FILING DATE		GROUP	
<b>U.S. PATENT DOCUMENTS</b>							
EX. IN.	JC44	DOCUMENT NUMBER	DATE	NAME	CLASS	SUBCLASS	FILING DATE IF APPROPRIATE
							
<b>FOREIGN PATENT DOCUMENTS</b>							
		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUBCLASS	TRANSLATION YES      NO
							
<b>OTHER DOCUMENTS ( Including Author, Title, Date, Pertinent Pages, Etc.)</b>							
<p>"OPTICAL SENSOR USING SURFACE PLASMON RESONANCE PHENOMENON", Measuring and Control, vol. 36, No. 4, p.275-276, April 1997</p>							
<p>R. Cush et al., "THE RESONANT MIRROR: A NOVEL OPTICAL BIOSENSOR FOR DIRECT SENSING OF BIOMOLECULAR INTERACTIONS PART 1: PRINCIPLE OF OPERATION AND ASSOCIATED INSTRUMENTATION", Biosensors &amp; Bioelectronics 8 (1993) p 347-353</p>							
<p>R.C. Jorgenson et al., "A FIBER-OPTIC CHEMICAL SENSOR BASED ON SURFACE PLASMON RESONANCE", Sensors and Actuators B 12 (1993) p213-220.</p>							
<p>"IMMUNOASSAY OF METHAMPHETAMINE" The Chemical Society of Japan, 70<sup>th</sup> Spring Annual Meeting 96.</p>							
EXAMINER				DATE CONSIDERED			

EXAMINER: Initial if citation considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.